

REMARKS

By this amendment, claims 1-13 have been cancelled, claim 17 has been amended, and claims 20-30 have been added. Accordingly, claims 14-30 are in the application and subject to examination.

The cancellation of claims 1-13 overcomes the double patenting rejection under 35 U.S.C. § 101. The amendment of claim 17 to add the phrase “in the second jaw” overcomes the indefiniteness rejection under 35 U.S.C. § 112, second paragraph. No new matter has been added by the amendment of claim 17. New claims 20-30 have been added to describe the invention in more detail. Claims 20-30 are supported by the specification and FIGS. 7-9 of the drawings, and do not involve the addition of new matter.

With respect to the obviousness rejection under 35 U.S.C. § 103(a), the examiner has rejected claims 14, 15, 18, and 19 over the patents to Donlon, et al., U.S. 5,618,307 in view of the patent to Sasaki, U.S. 5,081,811. The examiner has rejected claims 16 and 17 over the same patents, and further in view of the patent to Hasson, U.S. 5,211,655. Applicant traverses the rejection of claims 14-19 and requests reconsideration. The following remarks also are applicable to new claims 20-30.

The principal reference relied on by the examiner is the patent to Donlon. The Donlon patent, however, contains a number of separate embodiments. The examiner has relied on four of these embodiments: embodiment I (FIGS. 25-27), embodiment II (FIGS. 17-22), embodiment III (FIGS. 7-9), and embodiment IV (FIG. 1). Because of their disparate teachings, these four embodiments amount to four separate references.

In addition to using Donlon's multiple teachings, the examiner also has relied on the patents to Sasaki and Hasson. Therefore, the examiner, in effect, has used six separate references to reject claims 14-19.

Applicant is aware that there is no formal upper limit on how many references may be combined in order to reject a claim. Nevertheless, the more references that must be used in order to reject a claim, the less likely it would be that one skilled in the art would have been motivated, or even able, to make the modifications in question. Accordingly, although the examiner's use of six references is not dispositive of the unobviousness of the present invention, nevertheless it strongly suggests that the invention in fact would not have been obvious to one skilled in the art.

In addition to the use of many references to reject the claims, the examiner has relied on a patent (Sasaki) that relates to holding together wood logs used as part of log cabins. The Sasaki patent is classified in Class 52, Static Structures (e.g., buildings). Since the claimed invention relates to aorta cross clamp assemblies in Class 606, Surgery, it bears no relation to a static structure such as a log cabin. One skilled in the art of designing aorta cross clamp assemblies would not have been motivated to look to static structures in order to find a teaching of a retainer having two modes of operation. Thus, the examiner's reliance on a "Self-Locking Nut Mechanism" used to build log cabins is further indication that the claimed aorta cross clamp assembly would not have been obvious to one skilled in the art.

Turning to claim 14, the examiner correctly notes that Embodiment I of the Donlon patent does not disclose a retainer having two modes of operation, as claimed. The examiner then refers to Embodiment II for a teaching of such a retainer, but notes

that it would not “combine well” with Embodiment I. The examiner next cites the Sasaki patent for a threaded retainer having two modes of operation. Putting these references together, the examiner contends that it would have been obvious to modify Embodiment I by providing the retainer of Sasaki to permit the clamp to be quickly and easily moved into a clamped configuration and then locked in the clamped configuration as taught by Embodiment II and Sasaki.

A problem with the approach taken by the examiner is that Donlon did not make the combination in question and the examiner has not pointed to any evidence of record concerning why one skilled in the art would have been motivated to make the combination in question. Donlon discloses a “slow acting” embodiment with threads and a “fast acting” embodiment with a ratchet and pawl. If it would have been obvious to make the threaded embodiment fast acting, then Donlon and his co-inventors seemingly would have been the ones to do so since they were the inventors of both Embodiment I and Embodiment II. The fact that a reference from the building trades was necessary to make the combination is evidence that the combination would not have been obvious. At least it was not obvious to Donlon and his co-inventors, who presumably were skilled in the art of designing aorta cross clamp assemblies. In view of this shortcoming of the prior art, the obviousness rejection of claim 14 should be reconsidered and withdrawn.

Claims 15-19 are dependent, either directly or indirectly, on claim 14. As such, these claims also should be allowable. With specific reference to claim 16, the examiner correctly notes that Embodiment I of Donlon does not disclose that the first jaw is connected to the base. Instead, the examiner relies on jaw 48 in Hasson for a teaching of a first jaw connected to a base. The problem with substituting Hasson’s

hinging mechanism for Donlon's is that such a substitution would render the Donlon device unworkable. That is, Donlon's Embodiment I requires that both jaws 308B and 310B be prevented from rotating while actuator housing 324B is rotated so as to move housing 324B back and forth along jaw extension 320B. If jaw 308B were to be fixed to a base (housing 324B), the jaws 308B, 310B would rotate with the housing 324B and actuation would not be possible. Such rotation also would cause grievous harm to the artery or other vessel that was being clamped by the jaws 308B, 310B because the artery or other vessel would be twisted. Since the modification suggested by the examiner would render the Donlon device inoperable, such modification is not permissible.

Concerning claim 17, the examiner correctly notes that neither Donlon, Sasaki, nor Hasson disclose the claimed link. Instead, the examiner contends that it is "notoriously old and well known in the art" to provide a link that will cause axial motion without transferring rotational motion. One of the advantages of the claimed construction is that it permits the jaws to be opened and closed by structure that is quite compact. This is an important consideration in a surgical theater. Since the claimed link provides an important function, and since the examiner has not found a reference to teach such a link in the context of the present invention, it is incorrect to contend that the claimed invention would have been obvious in view of the prior art that has been cited against the claims.

CONCLUSION

In view of the foregoing amendments to the claims and remarks, the application now should be in condition for allowance. If the Examiner has any remaining questions, he is requested to telephone the undersigned attorney in order to expedite prosecution of the application.

Respectfully submitted,

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